

Replaced By  
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## CLAIMS

What is claimed is:

1. A bubble cap comprising a cap with at least one slot and a riser, configured with a skirt  
5 height of at least 4 cm such that  $1.5 * \text{Skirt Height (cm)} + [\text{Slot Length (cm)} - \text{Exposed Slot Height (cm)}] \geq 7.5$ , and posed such that a liquid fluid and a gaseous fluid flow co-currently upwardly in a space between the riser and the cap.
2. The bubble cap of claim 1, wherein  $1.5 * \text{Skirt Height (cm)} + [\text{Slot Length (cm)} - \text{Exposed Slot Height (cm)}] \geq 15$ .
- 10 3. The bubble cap of claim 1, wherein  $1.5 * \text{Skirt Height (cm)} + [\text{Slot Length (cm)} - \text{Exposed Slot Height (cm)}] \geq 22.5$ .
4. The bubble cap of claim 1, wherein  $1.5 * \text{Skirt Height (cm)} + [\text{Slot Length (cm)} - \text{Exposed Slot Height (cm)}] \geq 30$ .
5. A bubble cap comprising a cap with at least three slots and a riser, configured with a skirt  
15 height of at least 4 cm such that  $1.5 * \text{Skirt Height (cm)} + [\text{Slot Length (cm)} - \text{Exposed Slot Height (cm)}] \geq 7.5$ , and disposed such that a liquid fluid and a gaseous fluid flow co-currently upwardly in a space between the riser and the cap.
6. The bubble cap of claim 5, wherein  $1.5 * \text{Skirt Height (cm)} + [\text{Slot Length (cm)} - \text{Exposed Slot Height (cm)}] \geq 15$ .
- 20 7. The bubble cap of claim 5, wherein  $1.5 * \text{Skirt Height (cm)} + [\text{Slot Length (cm)} - \text{Exposed Slot Height (cm)}] \geq 22.5$ .
8. The bubble cap of Claim 5, wherein  $1.5 * \text{Skirt Height (cm)} + [\text{Slot Length (cm)} - \text{Exposed Slot Height (cm)}] \geq 30$ .
9. A bubble cap comprising a cap with at least five slots and a riser, configured with a skirt  
25 height of at least 4 cm such that  $1.5 * \text{Skirt Height (cm)} + [\text{Slot Length (cm)} - \text{Exposed Slot Height (cm)}] \geq 7.5$ , and disposed such that a liquid fluid and a gaseous fluid flow co-currently upwardly in a space between the riser and the cap.